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The General Needs of Developing Countries

Besoins généraux des pays en développement

Die allgemeinen Bedürfnisse der Entwicklungsgebiete

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"There are no under developed countries, there are under equiped countries". If with this statement President Mobutu of Zaire dramatized the lack of infrastructure and other productive assets in the developing countries, that is because his country is a stricking example of a country very rich by its natural resources but has no adequate productive assets and infrastructure to make good use of this wealth.

If Zaire is an extreme case it is by no means a unique case. All developing countries lack, in various degrees, economic infrastructure, social infrastructure and directly productive assets, both in agriculture and industry. This is the logical outcome of their history in the past two centuries. Until the end of the Second World War they were under foreign domination in one way or another. They were considered by the dominating powers as a source of raw materials and a market for industrial finished goods. Consequently, whatever infrastructure may have been constructed in these countries was designed to serve the objective of producing and exporting raw materials. Where there was no raw materials of interest to the dominating power hardly any infrastructure existed; a typical example is Rwanda, where at the independece there was not a single paved road.

During the Second World War, the nationalist aspirations for independence was accompanied by high aspirations of the masses for better living conditions. Three major factors stimulated the aspiration for improved living conditions: The first factor was the large movements of allied armies in some developing countries with the soldiers displaying a pattern of consumption quite attractive to the impoverished masses; the second factor was the proliferation of movie theaters showing films displaying life in developed countries, for a few cents

the working classes in developing countries could see how an American worker lived, or at least how Hollywood thought he lived; the third major factor in stimulating the aspirations of the masses was the position taken by many political leaders who presented the colonial fact as the sole responsible for the poverty and all other evils, many forgot to explain that the road to development after independence will be long and tedious. Consequently the masses imagined that with the departure of the occupation armies living conditions will improve instantly.

When National Governments started taking over the administration after the Second World War, first in Asia then in Africa, they had to face the mounting pressures from the people who expected them to achieve in a few years what most developed countries achieved in two centuries. The political pressure on the National Governments was enhanced by the fast rate of urbanization that followed independence. Rural populations impatient for improving their living conditions and seeing that no significant change took place in their villages decided to move to the capital in the hope to find a better employment opportunity. Thus more problems were created which National Governments had to face, and more political pressures were put on them. In fact a great deal of the political instability in some developing countries can be attributed directly or indirectly to the frustrated hopes of the population.

This brief historic introduction was necessary to highlight the pressures under which National Governments have to operate in developing countries, and the importance of the element time in the action for development. To translate this general need for improving living conditions into specific needs of civil works, we may classify them in three major categories.

1. ECONOMIC INFRASTRUCTURE

They represent assets which are not direct inputs into production but those supporting services increase the economic productivity of the community. When National Governments tried to develop the production, agricultural or industrial, they were faced with a major bottleneck, namely transport. In an African country for instance; rice, a major item in the local diet, was sold at a certain time on the black market in the capital while farmers in some rural areas could not find a buyer for their rice because truckers refused to go at any rate on the existing dangerous track which connected this area to the major road.

Similarly in November 1976 the Minister of Foreign Affairs of Chad announced in a press conference, that in the northern part of Chad there was a shortage of 130,000 metric tons of cereals and in the southern part there was a surplus of 70,000 metric tons of cereals, but there was no mean of transportation to move the surplus from south to north.

In Mozambique the three northern provinces which have the highest agricultural potentialities need some 2,500 km of earth rural roads including a number of bridges in the next five years if they are to be developed. This problem is also common in some parts of Latin America. In Brazil a large programme of road construction to open up the sub-Amazonian area is underway. In Mexico also a large programme of feeder roads is underway as a part of a rural development programme.

In Asia the situation is a little different. Most of the countries are densely

populated, and the roads exist but at a standard which do not correspond to the existing traffic. In Indonesia for instance, in some rural areas gravel roads have ADT of more than 300 vehicles. Here the problem is a problem of up-grading existing roads.

Another type of bottleneck in the transport sector creeped up when some Governments tried to construct too fast, that is the port facilities. Two typical examples are Lagos and Jeddah where the waiting time for unloading reached 180 days at a certain moment.

In other countries a third type of transport problem exist that is over exhausted railways inherited at the independence. Two stricking examples were the Senegal Railway and the Congo Railway (CFCO). They needed complete rehabilitation which is underway.

To sum up the urgent needs in transport sector there is need for more roads of all types and standards from national highways to feeder rural roads and this in spite of the great efforts and large investments which have been made in the past 15 years. The main problem here is the choice of the optimum standard to meet the present and future needs, as well as the choice of the appropriate and most economic method of construction, that is the happy balance between labour intensive techniques and capital intensive technique, and the best use of local materials. The same also applies for railways and port facilities.

A second example of economic infrastructure are the marketing and storage facilities. The best example to illustrate this need is the sub-Sahelian area in Africa. This zone has high production potentialities but farmers do not produce more than their needs because of lack of marketing and storage facilities in the area. It has been argued in 1973/74 that had there been storage facilities in the sub-Sahelian area, enough cereals could have been stored in previous years to meet the needs of the Sahel area in the years of drought without any outside assistance or at least with very little assistance. However, until now, to our knowledge, no storage facilities are being constructed in this area.

2. SOCIAL INFRASTRUCTURE

This includes the structure necessary for providing social services such as schools, health clinics and administration offices. Needless to stress the importance of this type of construction. They are meant to produce the right kind of human being which will perform the economic and social change needed. Quantifying the need is nearly impossible.

To give an idea of what the situation was like: In one African Country at the independence there was only one high school for a population of three million. This might be an extreme case but in most of the developing countries there is a lack of schools and health clinics particularly in rural areas.

Other social infrastructures needed are: waste disposal facilities; sewerage, safe water supplies. In some capitals of the developing world, not to speak of towns of lesser importance, water is simply pumped into the distribution system without any treatment. Naturally, the rapid urbanization has increased the need for such services. While creating other needs, namely housing. The slums mushrooming around large cities in developing countries have caused a serious headache to National Governments. They constitute a serious threat

to health and security, hence the need for low cost housing schemes which solve the problem temporarily until new slums are rebuilt somewhere else creating new need for housing and so on, until the problem of immigration from rural areas to urban centres is solved from its root.

However, in the housing sector the needs are not limited to low cost housing but also to medium cost housing for the increasing number of young professionals and the newly emerging middle class.

Two vital elements in treating social infrastructure are the rapidity of construction and the reduction of costs. This brings the problem of methods of construction, materials to be used etc.

3. DIRECTLY PRODUCTIVE ASSETS

By this we mean assets which constitute inputs to production. In industry this means civil work for industrial plants; for power stations, thermal and hydrolic etc.. In agriculture we mean assets which are mainly associated with land there by increasing its productivity: examples, are canals, terraces, the physical structures for irrigation, drainage, soil and water conservation etc.. The needs in this sector are virtually illimited.

The major problems to be solved are the same as for the other types of civil works mentioned here above namely: rapidity of construction, choice of the optimum standards; and economy in the cost. This leads us to the problem of choice of designs, of technologies to be used, and choice of materials. This is what the following chapter is all about.